WHAT IS CLAIMED IS:

1. An electron source forming substrate where an electron-emitting device is arranged, comprising a substrate and an insulating material film which is disposed on a surface of said substrate, at which surface said electron-emitting device of said substrate is arranged, and which contains a plurality of metallic oxide particles having an average particle size within the range of 6 nm to 60 nm as expressed in a median value.

2. The electron source forming substrate according to claim 1, wherein said insulating material film further contains phosphorus.

3. The electron source forming substrate according to claim 1, wherein said insulating material film contains phosphorus in 1 weight portion to 10 weight portions.

4. The electron source forming substrate according to any one of claims 1 to 3, wherein a thickness of said insulating material film is within the range of 200 nm to 600 nm.

5. The electron source forming substrate

according to any one of claims 1 to 3, wherein the thickness of said insulating material film is within the range of 300 nm to 400 nm.

6. The electron source forming substrate according to any one of claims 1 to 3, wherein on said insulating material film, a film comprising an insulating material is further laminated.

7. The electron source forming substrate according to claim 6, wherein the thickness of the film comprising said insulating material is within the range of 20 nm to 150 nm.

8. The electron source forming substrate according to claim 6, wherein the thickness of the film comprising said insulating material is within the range of 40 nm to 100 nm.

9. An electron source forming substrate where an electron-emitting device is arranged, comprising a substrate and an SiO_2 film which is disposed on the surface where said electron-emitting device of said substrate is arranged, and which contains a plurality of metallic oxide particles having an average particle size within the range of 6 nm to 60 nm as expressed in the median value.

10. The electron source forming substrate according to claim 9, wherein said SiO_2 film further contains phosphorus.

11. The electron source forming substrate according to claim 9, wherein said SiO_2 film further contains phosphorus in 1 weight portion to 10 weight portions.

12. The electron source forming substrate according to claim 9, wherein the thickness of said SiO_2 film is within the range of 200 nm to 600 nm.

13. The electron source forming substrate according to claim 9, wherein the thickness of said SiO_2 film is within the range of 300 nm to 400 nm.

14. The electron source forming substrate according to claim 9, wherein on said SiO_2 film a film comprising an SiO_2 film is further laminated.

15. The electron source forming substrate according to claim 14, wherein the thickness of the film comprising said SiO_2 film is within the range of 20 nm to 150 nm.

16. The electron source forming substrate

according to claim 14, wherein the thickness of the film comprising said SiO_2 film is within the range of 40 nm to 100 nm.

17. The electron source forming substrate according to claim 1 or 9, wherein the average particle size as expressed in said median value is within the range of 15 nm to 30 nm.

18. The electron source forming substrate according to claim 1 or 9, wherein said metallic oxides particles are electron conduction oxide particles.

19. The electron source forming substrate according to claim 1 or 9, wherein said metallic oxide particles are metallic oxide particles chosen from Fe, Ni, Cu, Pd, Ir, In, Sn, Sb and Re.

20. The electron source forming substrate according to claim 1 or 9, wherein said metallic oxides particles are particles of SnO_2.

21. The electron source forming substrate according to claim 1 or 9, wherein said substrate is a substrate containing sodium.

22. An electron source comprising the substrate

and an electron-emitting device arranged on said substrate, wherein said substrate is the electron source forming substrate according to claim 1 or 9.

23. The electron source according to claim 22, wherein said electron-emitting device is an electron-emitting device comprising an conductive film containing an electro-emitting portion.

24. The electron source according to claim 22, wherein a plurality of said electron-emitting devices are matrix-wired by a plurality of row-directional wirings and a plurality of column directional wirings.

25. The electron source according to claim 22, wherein said electron-emitting device is an electron-emitting device comprising an conductive film containing the electron-emitting portion between one pair of electrodes.

26. The electron source according to claim 25, wherein a plurality of said electron-emitting devices are matrix-wired by a plurality of row-directional wirings and a plurality of column directional wirings, wherein said one pair of electrodes are composed of the material comprising platinum as the principal component and wherein said wirings are composed of the material

comprising silver as the principal component.

27. An image display apparatus comprising an envelope, an electron-emitting device disposed said envelope, and an image display member for displaying images by irradiation of the electron from said electron-emitting devices, wherein the substrate where said electron-emitting device is arranged is the electron source forming substrate according to claim 1 or 9.

28. The image display apparatus according to claim 27, wherein said electron-emitting device is an electron-emitting device comprising an conductive film containing the electron-emitting portion.

29. The image display apparatus according to claim 27, wherein a plurality of said electron-emitting devices are matrix-wired by a plurality of row-directional wirings and a plurality of column directional wirings.

30. The image display apparatus according to claim 27, wherein said electron-emitting device is an electron-emitting device comprising conductive film containing the electro-emitting portion between one pair of electrodes.

31. The image display apparatus according to claim 30, wherein a plurality of said electron-emitting devices are matrix-wired by a plurality of row-directional wirings and a plurality of column directional wirings, wherein said one pair of electrode are composed of the material comprising platinum as the principal component and wherein said wirings are composed of the material comprising silver as the principal component.